NOVUS

**The Product Management Club
of
IIM Visakhapatnam**

Presents

THE PRODUCT MANAGEMENT COMPENDIUM

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What is Product Management?

Product management is a company's organizational function that handles a product's life cycle. This includes the development of new products as well as the planning, production, pricing, marketing, and final product launch. Product managers aim to develop a product that is better or different from the company's current offerings, which ensures the new product is valuable to its target audience.

So, the field of product management primarily revolves around the creation and development of new products or features for the company which enhances customer value as well as impacts the revenue of the firm positively.

What does a Product Manager do?

Typically, product managers are responsible for putting product management principles into action. This includes:

- Pitching and positioning new ideas for product and feature development.
- Working with engineering and design teams to bring the product to life.
- Ensuring that each product meets the needs of the target user or customer.

This is a key differentiator between product management and project management, the latter of which is more focused on the actual organization and resourcing for each initiative rather than setting the entire product vision.

Why are Product Managers important?

Product managers play an important role in the introduction of new products and user experiences. They sit at the crossroads of UX or user experience teams, engineering teams, and business leaders, acting as the glue that ties the unified product vision together.

Most importantly, product managers define success for each product, establish the product strategy, and show how it will benefit both the consumer and the company's goals. Teams would struggle to navigate the diverse interests that exist across both large and small enterprises without the voice of a product owner.

What is Product Lifecycle Management?

Product Lifecycle Management (PLM) is the process of managing a product's full lifecycle, beginning with its conceptualization, design, development, and production and ending with its usage, maintenance, and eventual retirement. PLM is a strategic approach that assists firms in optimizing their products and processes over their entire lifespan. The PLM process is often divided into multiple interrelated stages as visualized below,

Conceptualization and Ideation: This is the first stage in which new product concepts are formed. It entails brainstorming, market research, and determining customer requirements. The goal is to define a clear product concept and determine its market worth.

Design and Development: The product concept is turned into specific designs at this phase. Engineers and designers construct prototypes, simulate products, and refine product specifications. This phase frequently involves team involvement to ensure that the design is viable and matched with the anticipated functionality.
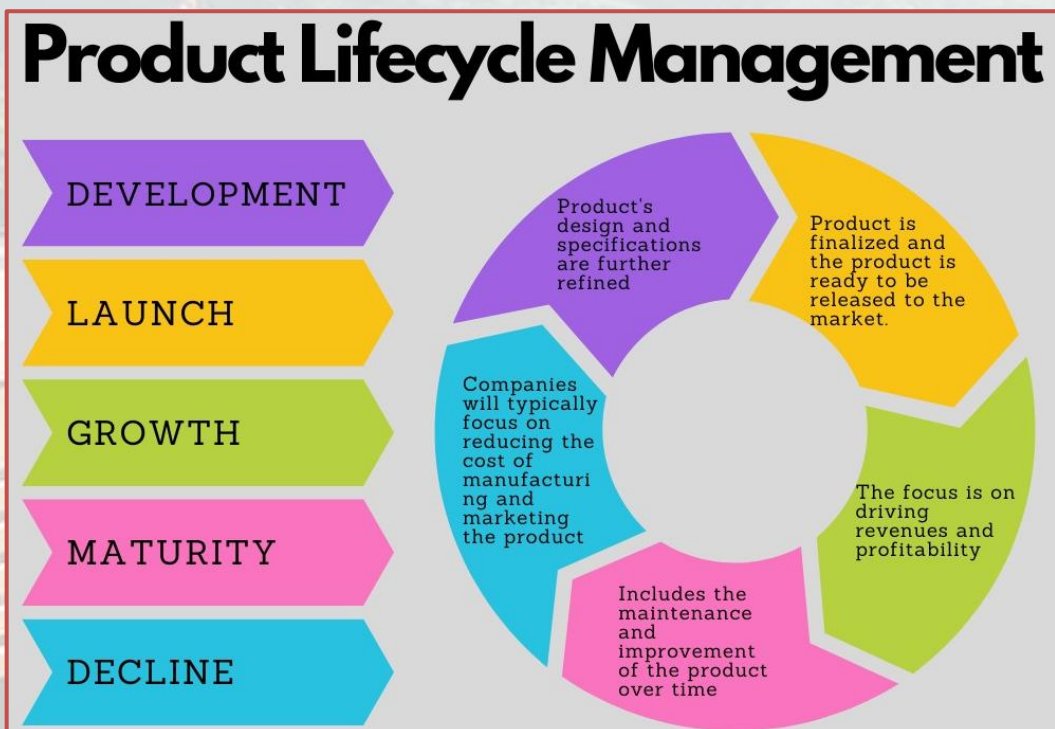
Testing and Validation: Once the design is finalized, prototypes are constructed and thoroughly tested. This phase tries to discover and correct any defects in the design, functional issues, or potential dangers. Performance

evaluations, quality control, and regulatory compliance checks are all examples of testing.

Utilization and Maintenance: After the product has been delivered to the customer, continuing support and maintenance are required. Addressing consumer inquiries, providing technical support, and delivering updates or patches as needed to improve the product's performance and address any issues that develop are all part of this phase.

Monitoring and Feedback: Organizations collect consumer input and monitor product performance in real-world scenarios throughout the product's lifecycle. This feedback is used to identify areas for improvement, resolve consumer problems, and make changes to the product or its supporting services as needed.

Decline: When a product reaches the end of its useful life, decisions about its retirement must be made. This phase entails planning for the product's termination, maintaining leftover inventory, and dealing with environmental issues associated to its disposal or recycling.

Product Lifecycle Management

DEVELOPMENT

LAUNCH

GROWTH

MATURITY

DECLINE

Product's design and specifications are further refined

Product is finalized and the product is ready to be released to the market.

Companies will typically focus on reducing the cost of manufacturing and marketing the product

The focus is on driving revenues and profitability

Includes the maintenance and improvement of the product over time

Roles and Responsibilities of a Product Manager:

The below chart describes different goals that a product manager seeks in the four differentstages of the product lifecycle.

Product Management's Role
At Every Phase of the Product Lifecycle

Subject Expert

Goal:
Getting to product-market fit

Focus:
Adapting rapidly to new insights from customers and the market

Growth Hacker

Goal:
Expand reach, scale, and stay competitive

Focus:
Supporting more users while optimizing to accelerate growth

Retention Strategist

Goal:
Retention. Sustaining market share

Focus:
Evolving value proposition while focusing on customer satisfaction and delight. Battling churn.

Solution Seeker

Goal:
Determining the best outcome

Focus:
Thinking strategically about pivoting, resurrecting current offering, or phasing out.

| Introduction | Growth | Maturity | Decline |

Different Product Management Frameworks:

1)   The RICE Framework:

Product managers use the RICE framework to evaluate and prioritize projects or features basedon four important factors: reach, impact, confidence, and effort. You can prioritize efforts thatare likely to bring the most value and impact to your product and users by assigning scores toeach of these variables.

Reach: The number of users who will be impacted by the project or feature is referred to as its reach. It assists you in determining the size of the prospective audience and the magnitude of the influence.

Impact: The positive change or benefit that the project or feature is projected to provide isrepresented by impact. It could be in the form of money, user engagement, customer satisfaction, or anything else.

Confidence: Your level of certainty regarding the prospective impact is reflected in your level ofconfidence. It considers the degree of ambiguity, data, and research available to back up yourassumptions about the project's results.

Effort: It estimates the resources (time, money, and staff) needed to implement the project orfeature. It assists you in determining the viability and expense of each effort.

Each factor is assigned a numerical score, often on a scale of 1 to 10, and the RICE score for eachproject or feature is calculated:

$$\frac{Reach \times Impact \times Confidence}{Effort} = RICE\ Score$$

Projects or features with higher RICE scores are often prioritized because they have a broadreach, big impact, high confidence, and reasonable effort.

2) MoSCoW

The MoSCoW framework is a prioritizing technique used in project management and productdevelopment to identify and prioritize requirements, features, or tasks based on the importance and urgency of their importance and urgency. The framework assists teams in making educated judgments about what should and should not be included in a project or release.

Must-Have: These are the critical requirements or features that are essential for the project's success or for meeting user needs. Without these, the project would not be considered viableor valuable. Must-have items are non-negotiable and must be included in the scope.

Should Have: These are important requirements or features that significantly enhance the

project's value but are not absolutely essential for the core functionality. Should-have items are prioritized after must-have items and are included if resources and time allow.

Could Have: These are desirable requirements or features that would be nice to have but arenot critical to the project's success. They add extra value or delight to users but can be deferred to future releases if necessary.

Won't Have: These are requirements or features that are explicitly excluded from the currentscope. They may not align with project goals, have a low priority, or require excessive resources. Won't-have items are deferred to future releases or discarded altogether.

MoSCoW Prioritization

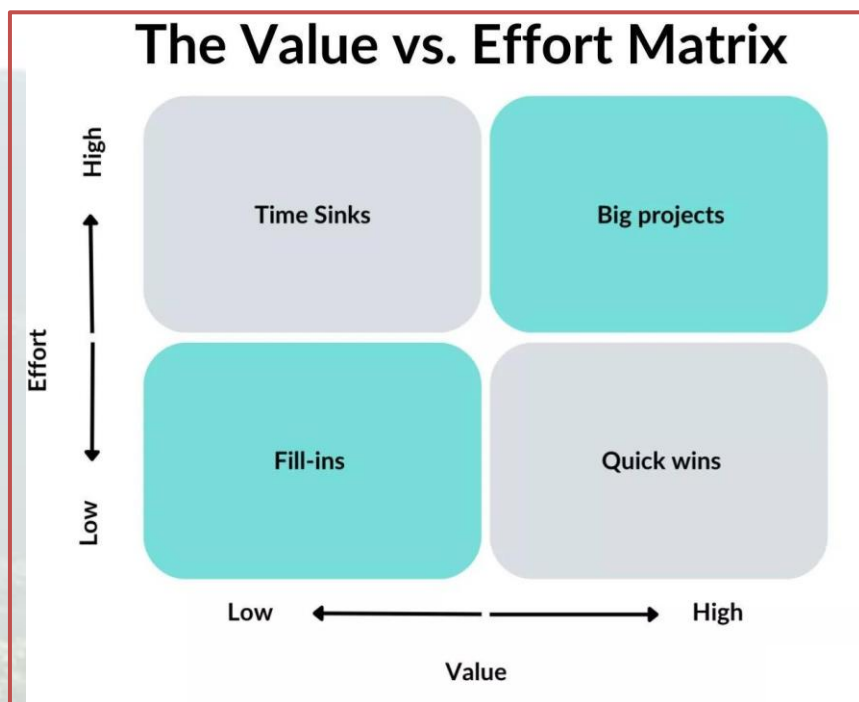| MUST HAVE	SHOULD HAVE	COULD HAVE	WON'T HAVE
All the requirements that are necessary for the successful completion of project	All the requirements that are important for project completion but not necessary.	All the requirements that are nice to have but has a much smaller effect when left out of the project.	All the requirements have been recognized as not a priority for the project's framework.
01	02	03	04

The MoSCoW framework is particularly useful when there are limitations in terms of time,resources, or budget. It helps teams focus on delivering the most impactful and valuable features first, ensuring that the core objectives are met before considering additional enhancements.

3) High-Value, Low-Effort (HVLE):

The Value vs. Effort Matrix is a visual tool and prioritization technique used in project management and product development to assess and prioritize tasks, features, or projects based on their potential value or impact compared to the effort required to complete them.

This matrix helps teams make informed decisions about where to allocate resources, focusingon initiatives that offer the highest value relative to the effort invested.

The Value vs. Effort Matrix

	Low Value	High Value
High Effort	Time Sinks	Big projects
Low Effort	Fill-ins	Quick wins

Effort (High → Low) vs. Value (Low → High)

The matrix typically consists of four quadrants:

Quick Wins (High Value, Low Effort): This quadrant includes tasks or projects that offer significant value to the organization or users and require relatively low effort to complete. These are often seen as "low-hanging fruit" and can deliver tangible benefits with minimal resources.

Major/Bigs Projects (High Value, High Effort): In this quadrant, tasks or projects have the potential for substantial impact or value, but they also demand significant effort, time, orresources to complete. These initiatives are important but may need careful planning and allocation of resources.

Fill-Ins (Low Value, Low Effort): This quadrant includes tasks or projects that offer limited value and require minimal effort. While these may not deliver substantial benefits, they canbe completed quickly and might be considered for inclusion if there is spare capacity.

Time-Consuming/Sinks (Low Value, High Effort): Tasks or projects in this quadrant demandsignificant effort but provide limited value or impact. These initiatives should be carefullyevaluated and may be deprioritized in favors of those with greater potential.

What is Design Thinking?

Design thinking is a creative problem-solving approach that prioritizes empathy, collaboration, and iteration to generate innovative solutions. It emphasizes understanding the needs and perspectives of users, often through immersive research and observation, to identify challenges and opportunities. Design thinking typically follows a structured process involving stages like empathizing, defining the problem, ideating, prototyping, and testing.

This iterative process encourages the exploration of diverse ideas, encourages experimentation, and places user feedback at the core of refining and developing solutions. It is widely used across various industries to foster user-centered innovation and address complex problems effectively.

How is Design Thinking valuable for a Product Manager?

Incorporating design thinking into product management can lead to more innovative, user- centered, and successful product outcomes, fostering a deeper connection between the product and its intended users.

1. **User-Centric Approach:** Design thinking encourages product managers to deeply understand users' needs, behaviors, and pain points. By empathizing with users, product managers can create products that truly address their requirements, leading to higher user satisfaction and adoption rates.

2. **Problem Definition:** Clearly defining the problem is a crucial step in design thinking. Product managers can use this approach to dissect and understand the root causes of issues, ensuring that the products they develop effectively solve real challenges.

3. **Idea Generation and Innovation:** Design thinking's ideation phase encourages brainstorming and the exploration of diverse ideas. Product managers can leverage this phase to come up with innovative features, functionalities, and solutions that may not have been initially considered.

4. **Rapid Prototyping:** Design thinking promotes the creation of prototypes that allow stakeholders to visualize and interact with the product early in the development process. This approach helps product managers gather feedback and make necessary adjustments before investing significant time and resources.

5. **User Testing and Feedback:** Design thinking emphasizes continuous user testing and feedback loops. Product managers can involve users throughout the product development lifecycle, gaining insights that guide refinements and iterations, ultimately resulting in products that align more closely with user needs.

6. **Collaboration and Cross-Functional Teams:** Design thinking encourages collaboration among cross-functional teams, including designers, engineers, marketers, and more. This multidisciplinary approach fosters a holistic understanding of the product and promotes diverse perspectives, leading to more well-rounded solutions.

7. **Iterative Improvement:** Just as design thinking promotes iteration in the design process, product managers can apply the same principle to product development. By continually refining and enhancing products based on user feedback, product managers can ensure ongoing relevance and success.

8. **User Experience (UX) Design:** Design thinking complements UX design principles, ensuring that products are intuitive, user-friendly, and enjoyable to use. Product managers can work closely with UX designers to create seamless and delightful user experiences.

9. **Adaptability and Agility:** The iterative nature of design thinking aligns well with agile methodologies commonly used in product management. Product managers can adapt and pivot quickly based on changing market conditions, user preferences, and emerging technologies.

10. **Market Differentiation:** By incorporating design thinking, product managers can create products that stand out in the market by addressing unmet needs, providing unique features, and delivering exceptional value to users.

What is the difference between a project manager and a product manager?

A project manager is responsible for overseeing the development, implementation, and completion of a given project, making sure it stays on schedule and within budget for its resources.

A product manager oversees the overall strategy, vision, and success of a product throughout its lifecycle, including the definition of features, prioritization of features, and alignment of features with customer wants and corporate objectives.

DIFFERENCES BETWEEN

A PRODUCT MANAGER — AND — A PROJECT MANAGER

A PRODUCT MANAGER	A PROJECT MANAGER
Product Managers own the "Vision."	Project managers own "Execution."
Product managers synthesize and communicate "strategy."	Project managers consolidate work tasks and communicate "status."
A product manager is responsible for feature definition.	A project manager (with help from business analysts) is responsible for requirements definition.
A vital focus area for a product manager is "Content."	A project manager's core focus is on "coordination."
A product manager spends a lot of time on "Feature Conceptualization."	A project manager spends time on "Feature Delivery."
A product may have multiple projects and project managers.	A project manager may manage a project or projects that span multiple products.
A product manager tries to optimize for the form and function of the product.	A project manager strives for optimizing cost, speed, and quality.
Product manager creates a Product Roadmap.	Project Manager creates the "Schedule."
A senior product leader may manage a "Product Portfolio."	A senior project leader may manage a "program."
A product manager makes their name based on product success in the marketplace.	A project manager makes their name based on project success internally.

How do you identify customers for your product?

Finding a product's intended audience includes:

1. **Market research** is the study of a market to determine its requirements, wants, andpreferences.
2. **User Personas:** The process for creating thorough profiles of potential customers basedon their characteristics, habits, and objectives.
3. **Segmentation**: The process of breaking the market into smaller groups with similar needsand features.
4. **Customer interviews** are conducted to discover more about the needs, concerns, andopinions of potential customers.
5. **Surveys and analytics:** Gathering quantitative data about potential users through surveysand data analytics.
6. **Competitor Analysis:** Analyzing your rivals' customers to determine who they are and whythey buy their items.
7. **Feedback Loops:** Constant relationship with current customers to make small modifications.
8. **Feedback from Sales and Support:** Getting opinions from the teams who deal directly withcustomers, sales, and customer support.

How do you identify and solve customer pain points?

There are various phases involved in identifying and resolving customer pain points:

1. **Listen and Collect Feedback:** Actively communicate with clients through interviews, surveys, customer support interactions, and social media to comprehend their difficulties and worries.
2. **Analyze Data:** Make use of analytics tools to spot patterns in user behavior that could besigns of problems, such as high bounce rates, low engagement, or user path drop-offs.
3. **Create User Personas:** Create thorough user personas to understand your consumers' problems from their point of view.

4. **Map user journeys** to spot touchpoints where users may run into problems or becomefrustrated.

5. **Priorities pain points** by ranking them according to their influence on user pleasure,customer retention, and corporate objectives.

6. **Propose Solutions:** While keeping the user experience in mind, brainstorm alternative answers to each problem.

7. **Prototype and Test:** Develop prototypes or minimal viable products (MVPs) to validatesolutions with actual users through usability testing and feedback loops.

8. **Iterate and refine:** Make improvements to solutions on a continuing basis to increase their efficacy.

9. **Implement and Monitor:** Integrate the improved solutions into your product and keep acareful eye on how they affect key performance indicators (KPIs) and customer happiness.

By resolving user experience issues, the aim is to improve user satisfaction, which can boostcustomer satisfaction, loyalty, and overall product success.
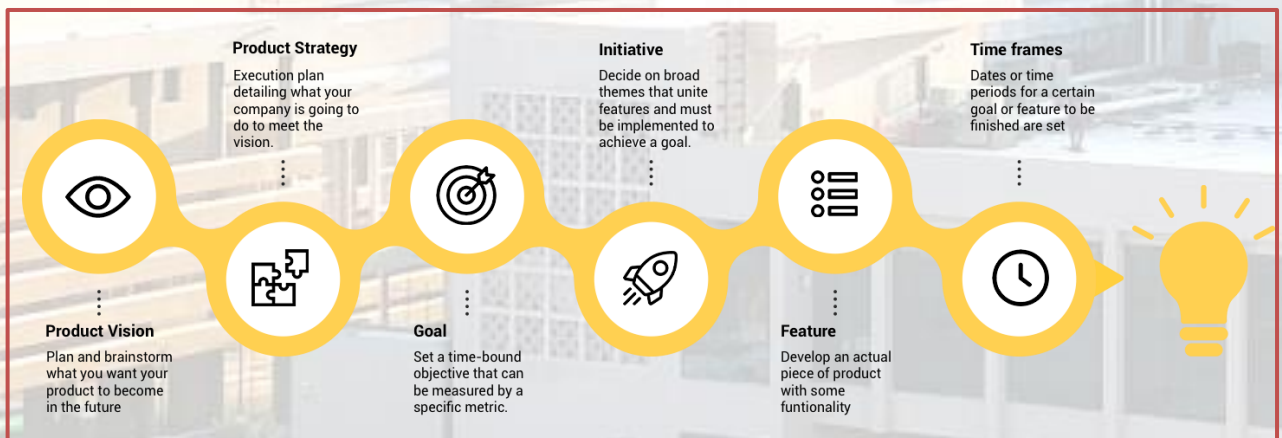
4 Types of Customer Pain Points

Financial Pain Point

When customers spend resources on their current business and end up in financial strain.

Productivity Pain Point

When customers want to spend their time more efficiently but are not able to do so.

Process Pain Point

When brands interact with customers by choosing different processes.

Support Pain Point

When customers do not receive the right support during their journey.

How do you develop your product roadmap?

Creating a product roadmap involves the following actions:

1. **Define a vision and goals**: Align your plan with the desired product and the overall goals of the business.

2. **Acquire Data**: Gather data from stakeholders, customers, statistics, and market trends.

3. **Prioritize initiatives** by placing them in order of importance, viability, and strategicplanning alignment.

4. **Establish a time frame** for each initiative, taking dependencies and resource availabilityinto consideration.

5. **Create Phases**: To demonstrate the progression of features, divide the roadmapinto time-based phases or releases.

6. **Resources should be distributed equally** among jobs for maintenance, technical debt, andnew features.

7. **Make the Roadmap clear**: Use a format that is easy to follow and understand, such as aGantt chart or timeline.

8. **Sharing the roadmap with stakeholders** can help you get their opinions and ensurealignment.

9. **Iterate and Modify**: Constantly revise the plan considering fresh information, user input, andshifting priorities.

10. **Maintain Flexibility**: Be willing to change the plan when market circumstances andorganizational requirements change.

Product Strategy
Execution plan detailing what your company is going to do to meet the vision.

Initiative
Decide on broad themes that unite features and must be implemented to achieve a goal.

Time frames
Dates or time periods for a certain goal or feature to be finished are set

Product Vision
Plan and brainstorm what you want your product to become in the future

Goal
Set a time-bound objective that can be measured by a specific metric.

Feature
Develop an actual piece of product with some funtionality

What is a user persona?

Personas are like pretend people that help product managers decide how to create things that customers will really like. There are two main kinds of personas — buyers and users. User personas show the people who use your product. They help us imagine these users in a way that everyone can understand. Buyer personas show what a perfect potential buyer would be like, and they give us clues about the people who choose to buy your product or service. The buyer and user are the same person in some cases, but they care about different things based on whether they're buying or using the product.

The main advantages of making user personas are:
1. Focusing on what the most important groups of users need.
2. Explaining why we make certain product choices.
3. Adding new things to the product that fit how customers will use them.
4. Choosing which features to create to solve real user problems.

What is MVP?

A Minimum Viable Product (MVP) is the simplest version of a new product or service that can be created and released to customers. It has the basic features needed to solve a specific problem or fulfil a certain need. The idea behind an MVP is to quickly test the product's viability in the market, gather feedback from users, and learn what works and what doesn't. This helps the creators improve and refine the product based on real-world user experiences and preferences. The MVP approach allows for faster development and reduces the risk of investing a lot of time and resources into a product that might not meet customer expectations.

Some examples are as below:

Twitter: Twitter's MVP was a very simple platform that allowed users to post short status updates and follow others. It helped them gauge interest in the idea of microblogging and sharing brief messages.

Dropbox: When Dropbox first launched, its MVP was a simple video that demonstrated the concept of cloud storage and file sharing. This video garnered a lot of interest and sign-ups, showing that there was a demand for the product before they even built the full application.

Uber: Uber's MVP was a basic app that allowed users to request a ride from nearby drivers. The app didn't have all the features and services that Uber now offers, but it allowed them to test the concept of ride-sharing and gather user feedback.

Zappos: Zappos, the online shoe and clothing retailer, initially started with a basic website displaying shoes from local stores. They would only purchase the shoes from the store after a customer placed an order. This proved the demand for online shoe shopping and helped them grow into the successful company they are today.

Top Product Management Tools that are widely used

There are several widely used product management tools that help teams plan, develop, and manage products. Some of the top ones are listed below:

Jira: Jira by Atlassian is a popular tool that offers various features for agile project management, including product backlog management, sprint planning, and issue tracking.

Trello: Trello is a visual project management tool that uses boards, lists, and cards to help teams organize tasks and track progress. It's particularly useful for its simplicity and flexibility.

Asana: Asana is a versatile work management tool that supports product management processes through task tracking, project planning, and collaboration features.

Product board: The product board is a product management platform that helps teams collect customer feedback, prioritize feature requests, and plan product roadmaps.

Aha!: Aha! is a comprehensive product management platform that covers idea management, road mapping, strategy planning, and collaboration for product teams.

Pendo: Pendo offers product analytics and user feedback tools to help teams understand user behaviours, make data-driven decisions, and improve the user experience.

Miro: Miro is a collaborative online whiteboard platform that can be used for brainstorming, wireframing, and visualizing product ideas.

Notion: Notion is an all-in-one workspace that can be customized for various purposes, including product roadmaps, task tracking, and team collaboration.

Roadmunk: Roadmunk specializes in creating visual and interactive product roadmaps that enable teams to communicate their plans effectively.

Key challenges in an end-of-life (EOL) process

The end-of-life (EOL) process refers to the phase in a product's lifecycle when it is discontinued or retired from the market. This process can present several challenges such as:

Customer Communication: Informing customers about the product's discontinuation can be challenging, especially if they rely on it. Proper communication is crucial to manage expectations and minimize negative impacts.

Transition Planning: If customers need to transition to an alternative product, careful planning is required to ensure a smooth migration. This includes data migration, training, andsupport for adopting the new solution.

Inventory Management: If the product involves physical goods, managing remaining inventory can be complex. Deciding whether to sell off existing stock, recycle, or dispose of itresponsibly requires careful consideration.

Supplier and Vendor Relationships: If the product relies on components from suppliers, theEOL process can impact these relationships. Ensuring suppliers are aware of your plans and finding alternatives if needed is important.

Regulatory and Compliance Issues: Depending on the industry, there may be regulationsgoverning the discontinuation of products, especially if they contain hazardous materials.Compliance with these regulations is essential.

Data and Security Concerns: If the product involves software or services, ensuring that customer data is handled appropriately during the transition or discontinuation process iscrucial for maintaining trust.

Customer Support and Service: Customers may require ongoing support even after a product is discontinued. Managing support requests and providing assistance during the transition can be challenging.

Brand Reputation: Mishandling the EOL process can damage a company's reputation.Customers may view it as abandonment or disregard for their needs.

Financial Considerations: Balancing the costs of managing the EOL process, including communication, inventory, and support, with potential revenue or cost savings is a complex financial challenge.

Employee Impact: Discontinuing a product can impact employees who worked on its development, support, and maintenance. Considerations such as reassignment, retraining, or potential layoffs need to be addressed.

Legal and Contractual Obligations: Contracts, warranties, and legal agreements associated with the product need to be considered. Meeting contractual obligations while winding down the product can be intricate.

Knowledge Transfer: Ensuring that knowledge about the product's development, maintenance, and support is transferred to relevant teams or individuals can prevent the loss of critical information.

Navigating these challenges requires a well-planned EOL strategy that considers customer needs, legal requirements, employee considerations, and the overall impact on the company's reputation and operations.

For more product frameworks like HEART, AIDA, AARRR, Circles, etc. follow Novus on Instagram

How to get into a PM role with no prior PM experience

1. Skills: Acquire skills in market research, data analysis, project management, UX design, and agile methodologies through courses and certifications.

2. Transferable Skills: Highlight problem-solving, communication, leadership, strategic thinking, and collaboration skills from past experiences.

3. Leverage Experience: Gain relevant experience in project management, business analysis, customer support, or entrepreneurship.

4. Volunteer: Assist with product-related tasks in your current role or through volunteering opportunities.

5. Build Portfolio: Create a portfolio showcasing your product management understanding and problem-solving abilities.

6. Networking: Connect with PM professionals, attend events, and seek mentorship for insights and recommendations.

7. Side Projects: Work on product concepts, market research, MVPs, or side business ventures to demonstrate skills.

8. APM/Junior PM Roles: Apply for Associate Product Manager or Junior PM positions to gain entry-level experience.

9. Persistence: Be proactive, tailor applications, and prepare for rigorous interviews.

Some other commonly asked questions in interviews

1. In your opinion, what is the most critical skill a Product Manager should possess, and how do you demonstrate that skill in your work?
2. What aspects of being a product manager do you find most rewarding?
3. What is the best thing about being a product manager?
4. What is the hardest thing about being a product manager?
5. Product Managers need to collaborate with cross-functional teams. How would you approach working with teams like engineering, design, and marketing to achieve the product's goals?
6. How do you envision your career progression as a Product Manager? Do you have any long-term goals related to product management?
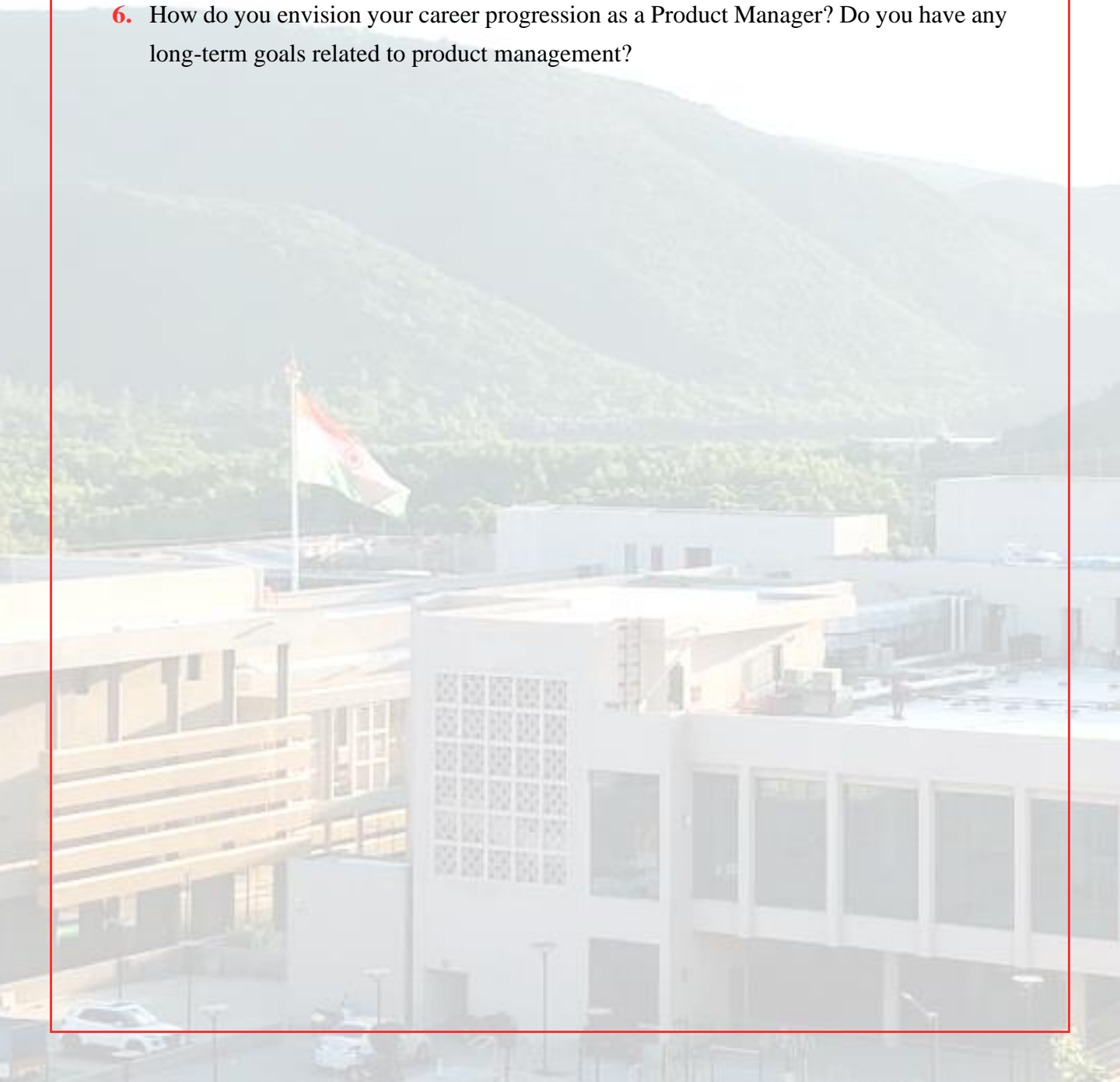
Useful resources to understand Product Management

Books to Read:

1. Decode & Conquer - https://amzn.to/3yIPDbl
2. Tech Simplified Book - https://amzn.to/3bTxsXK
3. Cracking the PM Interview- https://www.crackingthepminterview.com/
4. The Lean Product Playbook- https://www.amazon.com/Lean-Product-P...
5. Inspired- https://www.amazon.com/INSPIRED-Creat...
6. The Lean Startup-https://www.amazon.com/Lean-Startup-E...
7. Shape Up- https://basecamp.com/shapeup
8. Escaping the Build Trap- https://www.amazon.com/Escaping-Build...
9. The Influential Product Manager- https://www.amazon.com/Influential-Pr...

Podcasts to Listen:

1. The Product Podcast- https://podcasts.apple.com/za/podcast...
2. This is Product Management Podcast- https://podcasts.apple.com/us/podcast...
3. Scrum Master Toolbox- https://open.spotify.com/show/4r6DQLC...
4. 100 PM Podcast-https://podcasts.apple.com/us/podcast...

Free Beginner Courses:

1. Product Management course- great learning
2. Product Management Essentials- Future learn
3. The University of Maryland, College Park: Product Management Fundamentals
4. Product Management Foundation at Institute of Product Leadership, Bangalore
5. Google Project Management: Professional Certificate- Coursera

For more information on Product Management visit social media handles of Novus:

Thank You.